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Phase 1 Environmental Assessment
Aeroflight Executive Incorporated
King County International Airport
King County, Washington

March 17, 1998

Prepared For :

King County Division of Capital Planning and Development
Department of Construction and Facilities Management
King County Administration Building
500 Fourth Avenue, Room 320
Seattle, Washington 98104-2337

AGI Project No. 14,309.454

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A Report Prepared For :

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PHASE I ENVIRONMENTAL ASSESSMENT
AEROFLIGHT EXECUTIVE INCORPORATED
KING COUNTY INTERNATIONAL AIRPORT
KING COUNTY, WASHINGTON

March 17, 1998

Prepared by :

AGI Technologies
11811 N.E. 1st Street, Suite 201
Bellevue, Washington 98005
425/453-8383

and :

EcoChem, Inc.
405 Westland Building
100 South King Street
Seattle, Washington 98104

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AGI TECHNOLOGIES

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1.0 INTRODUCTION

This report presents results of a Phase I environmental assessment (EA) performed on the Aeroflight Executive, Inc. (Aeroflight) site at 8555 Perimeter Road South in Tukwila, Washington by AGI Technologies (AGI) and EcoChem, Inc. (EcoChem), at the request of King County. AGI's services were conducted in accordance with our February 5, 1998 proposal, work order No. 11, contract No. E73042E-A. EcoChem is a subconsultant to AGI under contract No. E73042E-A. This EA was conducted to evaluate potential environmental risks associated with the subject property due to hazardous and regulated materials. The EA was performed in accordance with ASTM Methods E1527-97 and E1528-96.

1.1 INVOLVED PARTIES

Richardson Aviation currently owns the building and holds a ground lease for the subject site from King County. In April 1998 Aeroflight intends to assume ownership of the building from Richardson Aviation while concurrently assuming the ground lease agreement with King County (Terrell, 1998).

1.2 PURPOSE AND SCOPE OF WORK

The purpose of this EA is to:

- Review past and current land use for indications of the manufacture, generation, use, storage and/or disposal of hazardous substances at the site.
- Evaluate the potential for site soil and/or groundwater contamination resulting from past and current land use activities, and to the extent possible, adjacent off-site operations.
- Recommend further investigations, if necessary, to evaluate whether contamination, environmental hazards, or special resource value concerns may exist at the locations identified.

The scope of work includes the following:

- ***Site History.*** Preparation of a site history based on historical information, maps, and interviews with individuals having past or current site knowledge.
- ***Site Visit and Investigation.*** Identification of current use and existing conditions of the property and types of land use and environmental conditions in the vicinity of the site. Assessment (to the extent possible) of the presence and use of hazardous chemicals, and underground storage tanks in the vicinity of the site.
- ***Regulatory Review.*** Review of regulatory agency records regarding environmental violations or reported incidents, storage or disposal practices for hazardous materials, status of any underground storage tanks, and nearby hazardous waste sites.

This Phase 1 EA summarizes the results of our research. The property location and results from the site visit are described in Section 2.0. Results from the regulatory review are reported in Section 2.0. Historical research is presented in Section 5.0. The results of the EA investigation are presented in Section 6.0.

1.3 PREVIOUS ENVIRONMENTAL/GEOTECHNICAL INVESTIGATIONS

King County Airport Engineer (Jeffrey Winters) and the President of Aeroflight Executive, Inc. (Mike Hill), have no knowledge of any prior environmental site assessment of the property or the facility that might indicate the presence of hazardous substances or petroleum products, contamination of the property, or any recommendations for environmental assessment of the property.

2.0 SITE DESCRIPTION

A reconnaissance was conducted on the Aeroflight site by EcoChem personnel (Jessie Compeau and Rich Tremaglio) on February 25, 1998. They were accompanied on this inspection by the King County Airport Engineer (Jeffrey Winters) and Aeroflight Executive, Inc. President (Mike Hill). Additional information was obtained during telephone conversations with others knowledgeable of the site. Conditions at the time of the visit are depicted in representative photographs (**Appendix A**) and recorded on a Transaction Screen Questionnaire (**Appendix B**).

2.1 LOCATION AND LEGAL DESCRIPTION

The Aeroflight facility is sited on a 1.2 acre parcel located on Perimeter Road South, which parallels the east perimeter boundary of the King County International Airport (Figure 1). The site address is 8555 Perimeter Road South with the property being accessible from Perimeter Road South. The legal description of the property and plat map were provided by King County Property Services Division:

Commencing at a concrete monument designated as Monument "E" and having U.S. Coast and Geodetic Survey coordinate values of: x equals 1,638,709.88; y equals 193,999.64; Thence North 27(12'26" East 841.27 feet; Thence North 2(52'05" East, 197.12 feet; Thence South 29(52'38" East 278.02 feet; Thence North 60(07'22" East, a distance of 220.45 feet to a point that is 15.00 feet West of the centerline of Southeast Perimeter Road, said point being the True Point of Beginning: Thence South 17(00'38" East along the Westerly right of way of Southeast Perimeter Road a distance of 67.85 feet; Thence along the arc of a curve bearing to the right a distance of 70.69 feet said curve has a radius of 135.00 feet and a chord bearing South 02(00'38" East a distance of 69.88 feet; Thence South 12(59'22" West a distance of 60.63 feet; Thence South 60(07'22" West a distance of 245.27 feet to a point 487.50 feet East of the centerline of the main runway 13R/31L; Thence North 29(52'38" West along a line that is parallel to the main runway a distance of 170.00 feet; Thence North 60(07'22" East a distance of 332.95 feet more or less to the True Point of Beginning. Said tract of land contains approximately 51,456 square feet.

2.2 SITE AND VICINITY CHARACTERISTICS

2.2.1 Site Improvements

Pertinent site features are shown on **Figure 2** and in **Appendix A.** The site address is 8555 Perimeter Road South with the property being accessible from Perimeter Road South. The Aeroflight facility is comprised of a prefabricated aluminum building with a parking lot located on the east. The building is comprised of two floors of offices and a metal hangar. Improvements have been made to the offices including: reallocating upstairs office space, adding an upstairs balcony and stairs to the north and west sides, and installing an additional downstairs bathroom.

There is landscaping on the east perimeter of the property that consists of evergreen shrubs and trees. The remainder of the site is paved. Cyclone/wood fencing (stepped back from Perimeter Road South) has been installed to control access to the maintenance shop and airfield.

2.2.2 *Current Uses Of The Property*

Aeroflight currently occupies the facility. Aeroflight specializes in "mini fixed-based operations" which includes student flight instruction; pilot support sales; courier services for small packages; chartering, renting and leasing aircraft; and performing maintenance on the Aeroflight aircraft fleet.

2.2.3 *Current Uses Of Adjoining Properties*

Aircraft tie down areas border the site to the north, west, and south, beyond which are commercial/light industrial properties to the north, King County International Airport to the west, and commercial property to the south. Specific land uses immediately adjacent to the subject property include the following:

- North: Commercial/light industrial - Washington Avionics, Inc.
- East - In order of proximity: Perimeter Road South, Airport Way South, Burlington Northern Railroad, and Interstate Highway 5.
- South: Washington State Special Forces Auxiliary Building.
- West: King County International Airport.

Potential sources of contamination to the Aeroflight site from adjacent properties were not evident.

2.3 HAZARDOUS MATERIALS

2.3.1 *Use*

The Aeroflight maintenance shop services a fleet of approximately 50 airplanes. Typical operations conducted in the maintenance shop include:

- Oil draining and grease and lubricant removal and replacement
- Engine parts and equipment cleaning
- Fluids replacement
- Heating of de-icing chemicals
- Welding repair operations on prefabricated equipment
- Beadblasting
- Aircraft fueling.

Chemicals stored in the maintenance area include several 55-gallon containers of aviation oil, 24 cases of 12 quart motor oil, one 55-gallon container of antifreeze, two 5-gallon containers and a 30 gallon container of 104/105 solvent (a naptha based petroleum solvent), and a 55-gallon container of Prist (a biological growth inhibitor). Items stored in a flammable storage cabinet included chemicals such as spray paints and miscellaneous cans of paint, enamel remover, methyl ethyl ketone (MEK) and paint thinner. A shelf in one of the bays contained small quantities of lubricants. Several oxygen and acetylene tanks were also observed in the maintenance shop.

Several other storage rooms and offices were observed in the maintenance area containing parts, miscellaneous small quantities of chemicals such as WD-40, and office supplies.

A storage area located inside of a detached shipping container adjacent to the building contained chemicals that included several 55-gallon containers of Prist, two 55-gallon containers of de-icing fluids (1,2-propylene glycol and water), one 55-gallon container of antifreeze and ten 1-gallon containers of muriatic acid. This storage area also contained pump bottles, empty 5-gallon gasoline cans, and a space heater.

Aeroflight owns four fuel trucks and leases one fuel truck to provide its own aircraft with "100 low lead" aviation gasoline and jet fuel (Hill, 1998). These fuel trucks fill up at a centralized fuel pump at Boeing Field and deliver fuel to the planes on an as needed basis. At the time of the site visit, the fuel trucks were parked south of the Aeroflight building. Absorbent pads and granules are readily available in case a spill should occur.

2.3.2 *Storage Tanks*

During the site reconnaissance EcoChem personnel did not observe any evidence of underground storage tanks. Two 350-gallon above ground used oil storage tanks with secondary containment are located under a covered area on the north side of the building (**Appendix A**). One 150-gallon above-ground used oil tank is located inside the maintenance area. The 150-gallon above ground tank is used to fuel a heater for the inside of the hangar during the colder months of the year. Historically, the Aeroflight building has been heated by electrical heat and has supplemented this by burning used oil in the maintenance area. Fuel is transferred via an inline system from the 350-gallon above ground used oil tanks and filtered into the 150-gallon above-ground used oil tank. Used oil is also poured directly (using a funnel) into the 150-gallon tank by mechanics during maintenance and repair operations. The 150- and 350-gallon tanks serving as receptacles for the used oil and the 55-gallon container for used oil filters were not clearly labeled. These containers temporarily store wastes until they are either burned as fuel onsite or are recycled offsite.

2.3.3 *Waste Generation And Disposal*

Typical wastes generated by these operations include used engine and hydraulic oils, spent antifreeze, spent lead batteries, used tires, degreasers, scrap metals, unused paints, and used oil and fuel filters. Used oil and oil filters and several spent batteries were observed in the maintenance shop area during the site visit. Aeroflight generates about 200 gallons of waste oil a month. The total oil storage capacity is 700 gallons. During the winter they burn about 150 gallons of waste oil per month in the waste oil heater. On rare occasions in the past Aeroflight has accepted used oil from other businesses performing similar maintenance and repair businesses in the area. Currently, Aeroflight does not accept used oil as they generate 200 gallons of used oil per month and have more than they need to fuel the furnace during the winter months. Aeroflight contracts with

licensed hazardous waste management services (Coastal Tank Cleaning Service, Safety Kleen Corporation, and National Aviation Supplies) for off-site recycling or disposal of waste and hazardous waste. Coastal Tank Service recycles or disposes the used oil filters, used oil sludge collected from the filtering process, and excess used oil. Safety Kleen Corporation maintains the parts washer and National Aviation Supplies recycles the batteries. No other indications of hazardous waste storage or disposal were observed during the site visit or reported in interviews.

There are presently no waste drains inside the building. Sometime prior to Aeroflight's tenancy in the building (1989) waste drains inside the maintenance area and outside the northwestern corner of the building were abandoned by filling them with concrete (Hill, 1998). During the site reconnaissance there was no evidence of water or staining on the abandoned waste drain (recessed about two to three feet below the grating) inside the maintenance shop. The condition of the abandoned catch basin outside the building (recessed about 18 inches below the grating could not be observed during the site visit due to standing water from a recent storm event.

Several open 55-gallon drums were used to collect office waste. A dumpster was located on the north side of the building.

2.3.4 *General Housekeeping*

During the site visit general shop housekeeping and organization appeared to be of average condition, although several unlabelled containers were observed. Access to the central area of the maintenance bay was impeded by various tool carts, propellers, 55-gallon drums, tires, and engine blocks surrounding two aircraft undergoing repair.

Spilled petroleum was observed beneath the 150-gallon above-ground used oil tank and underneath the engine blocks. The maximum quantity of spilled petroleum product at each location was estimated at about one quart.

We understand that prior to takeoff, pilots perform a sump check on their aircraft. This practice typically involves checking to see if there is water in the gas. Typically small amounts of gas (approximately one ounce) are dumped onto the pavement after "sumping" an aircraft. Aeroflight encourages its pilots to avoid this practice by disposing of this sump discharge in a 55-gallon barrel. This gasoline is taken by Aeroflight employees for personal use or handled by a licensed disposal company.

Surficial staining was observed on the paved area on the adjacent property north of Aeroflight due to parked vehicles and aircraft (Hill, 1998). However, during the site reconnaissance, this was not assessed to be a substantial environmental impact. Other staining and evidence of other spills was not observed.

2.4 OTHER CONDITIONS OF POTENTIAL CONCERN

2.4.1 *PCBs*

Prior to 1979, PCB containing oils were commonly used in transformers and fluorescent light ballasts. After 1979, this use was banned. Underground utilities serve Perimeter Road South properties, thus no pole or pad mounted transformers were observed in the vicinity of the property.

Fluorescent light fixtures were observed in the maintenance area of the Aeroflight building. Since the building was constructed prior to 1979, PCB-containing oils may be in ballasts of fluorescent light fixtures.

2.4.2 *Asbestos-Containing Materials*

During the site reconnaissance, a cursory visual surveillance was conducted to identify potential asbestos containing building materials (PACBM). The interior of the building was observed to identify generic building materials (floor tile, cove base molding, ceiling tiles, etc.) which have historically been manufactured (prior to 1979) with asbestos. Materials of potential concern identified include:

- The sprayed-on popcorn ceiling in the front lobby and the men's bathroom adjoining the maintenance bay.
- The cove base molding and mastic in the men's bathroom adjoining the maintenance bay.
- The 2 x 4 drop-in acoustical ceiling tiles in the staircase from the lobby to the second floor and above the work areas on the second floor.
- Drywall and dry wall mud throughout the building.

Window putty in the wood frame window on the west side of the building, roofing materials, construction materials on the ceiling above the maintenance bay, and areas above the drop-in ceiling tiles were not observed due to accessibility limitations. Similarly, invasive inspections for PACBM concealed by other materials (floor tiles covered by carpet) were not conducted. This surveillance did not positively identify building materials as containing asbestos, nor does this specifically identify building materials as non-asbestos containing, as a full scale asbestos building inspection was not conducted, and no physical samples were collected for analysis.

2.4.3 *Lead-containing Materials*

Since 1977, the Consumer Products Safety Commission has limited lead content in most paints to 0.06 percent. Prior to this, paint commonly contained higher concentrations of lead. Paint that is high in lead can cause human health problems if ingested. Also landfills may not accept demolition debris that contains lead paint due to potential environmental concerns. Based on the age of the building, some exterior and interior paints could be lead-based and so may require special handling and disposal during remodeling activities.

2.4.4 *Radon*

As described in The EDR-Radius Map with GeoCheckTM, presented in Appendix C, the site vicinity is ranked in the low radon potential group due to the presence of rock types not associated with uranium. The available data for this area is 0.2 picocuries per liter (pCi/L) which is well below the recommended action level of 4 pCi/L.

3.0 ENVIRONMENTAL SETTING

3.1 REGIONAL PHYSIOGRAPHIC CONDITIONS

Regionally, the site is located in the Puget Sound Lowland, a north-south trending structural and topographic depression bordered on the west by the Olympic Mountains and on the east by the Cascade Mountains. It is underlain by Tertiary volcanic and sedimentary bedrock and filled to the present-day land surface with Pleistocene glacial and nonglacial sediments.

3.2 SOIL/GEOLOGIC CONDITIONS

A review of published regional geologic information (Waldron, et. al., 1962; Liesch et.al. 1963) indicates the site is located in an area of the Duwamish River Valley that has undergone extensive modification (i.e. filling). Native sediments underlying the site are recent alluvial deposits that consist chiefly of sand and silt, but also includes clay and peat. These deposits may be 300 feet thick or more and are in turn underlain by older unconsolidated deposits and marine sedimentary rocks.

3.3 HYDROGEOLOGIC CONDITIONS

The first encountered groundwater is expected to be less than 25 feet below ground surface. Water obtained from wells that tap the recent alluvium of the Duwamish River Valley tends to be objectionably high in chloride content. The principal aquifers are in the unconsolidated material that lied at depths as much as 300 feet below the valley floor (Liesch et.al., 1963). Based on the regional topography and location with respect to the Duwamish River, we expect the direction of groundwater flow is generally northwest, toward and in the direction of the river flow.

3.4 SURFACE WATER FLOW

The property is relatively flat. The area around the site generally slopes from west to east. Based on topography, surface water at the site flows toward a storm drain serviced by the City of Seattle. This storm drain is located just east of the perimeter of the fence which controls access onto the southeast portion of the site.

Stormwater run-off from the King County International Airport is conveyed by underground storm drain lines to oil-water separators. The King County International Airport holds a National Permit Discharge Elimination System (NPDES) permit for Baseline and Maintenance Activities (Winters, 1998).

4.0 RECORDS REVIEW

As a part of the EA, state and federal databases were reviewed to identify and evaluate sites that generate, transport, store, or dispose of hazardous materials, or that have or that have known or potentially identified contamination that could adversely impact the property. Our research was conducted according to (at minimum) current ASTM standards for environmental site assessments. The EDR-Sanborn Company was contracted to perform analysis and reporting of regulatory agency databases. The EDR-Radius Map with GeoCheckTM is presented in **Appendix** C.

4.1 FEDERAL RECORDS SOURCES

National Priority List (NPL) The National Priority List identifies sites for priority cleanup under the Superfund Program. There are no NPL sites within a one-mile radius of the Aeroflight site. The Aeroflight site is not a listed NPL site.

CERCLIS List The CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) list is a compilation of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have been investigated, or are currently under investigation by the Environmental Protection Agency (EPA) for possible inclusion on the National Priorities List (NPL). There are no CERCLIS sites located on or within 0.5 miles of the Aeroflight site.

RCRIS (Resource Conservation and Recovery Act Information System) List The EPA maintains a list of facilities that generate, transport, store, treat and/or dispose of hazardous material, as required by the Resource Conservation and Recovery Act (RCRA). The subject property was not in the database. There is one treatment, storage, and/or disposal facility within 0.5 miles of the site listed in the RCRIS database. There are no large or small quantity generators of hazardous material within 0.25 miles of the site listed in the RCRIS database.

The treatment, storage, and/or disposal facility within 0.5 miles of the site is the Boeing Company's Plant 2 facility, located 1/4 to 1/2 mile west of the site, which is also listed for being a large quantity generator. The facility has been cited for violations and is undergoing Resource Conservation and Recovery Act (RCRA) Facility Investigation(s) and corrective action. Based on its relative distance from the subject site and location with respect to the expected direction of groundwater flow, this facility is considered unlikely to impact the subject site.

ERNS (Emergency Response Notification System) Spill reports made to the National Response Center (NRC) are documented in the ERNS database. The NRC may be contacted to report any number of types of toxic substances spills or releases. The Aeroflight site is not listed in the database.

4.2 STATE RECORDS SOURCES

Confirmed and Suspected Contaminated Sites Eight facilities or sites within approximately one mile of the property are included in the Washington State Department of Ecology's (Ecology) list of potential or confirmed contaminated sites. Of these eight sites, seven are at elevations lower than the Aeroflight site. Since we expect groundwater flow to be toward the Duwamish River, properties

at lower evaluations are unlikely to be a potential contamination source to this site.
One facility, Kenworth (Paccar) at 8801 East Marginal Way South, about 3/4 mile south of the Aeroflight site is at about the same elevation. Due to its relative distance and probable cross gradient location, this facility is considered unlikely to impact the Aeroflight site.

Independent Cleanup Reports (ICR) Reports received by Ecology are from the site owner or operator. The remedial action(s) has been conducted without Ecology oversight or approval and remedial actions were not conducted under an order or decree. ICRs have been received for eleven sites within approximately 0.5 mile. These sites are listed as undergoing or have undergone remedial action and thus are not considered to pose a potential for contamination of the Aeroflight site. Refer to pages three and four of the executive summary in **Appendix** C for a summarized listing of ICR sites or pages nine through 49 for information by site, as well as the Orphan List Summary in **Appendix** C.

Underground Storage Tank Program Information was obtained on the locations of active and inactive registered underground storage tanks (USTs) and leaking underground storage tanks (LUSTs) from the databases maintained by Ecology. There are no LUSTs on the subject property. There are, however, three LUST sites within approximately 0.5 miles of the property. These sites include Boeing Plant 2, the Earl M. Jorgensen Company, and BFI Federal Express Station. Of these, one site (BFI Federal Express Station) is at a higher or equal elevation relative to the Aeroflight site. This site is listed as reportedly cleaned up in 1995 (Bardy, 1998) and thus is considered unlikely to pose a potential for contamination to the Aeroflight site.

There are no registered USTs on the subject or adjoining sites.

4.3 LOCAL AGENCY SOURCES

The Seattle Fire Marshall's office (Neitzel, 1998) reported no knowledge of hazardous materials incidences on the property.

The Seattle-King County Department of Public Health (Seattle-King County Department of Health, 1984 and 1986) reported no abandoned or active landfills or disposal sites on or within 0.5 miles of the property.

5.0 HISTORICAL USE INFORMATION

Discussions with King County Airport Engineer (Jeffrey Winters) and Aeroflight President (Mike Hill) on February 12, 25, and 27, and March 4, 1998 indicate that the facility was constructed in 1975. Aeroflight has occupied it since 1989; several businesses have operated on the site prior to this. This information was generally confirmed by sources such as the street and Seattle telephone directories

5.1 AERIAL PHOTOGRAPHS

Aerial photographs (1936, 1946, 1956, 1960, 1969, 1974, 1980, 1985, 1990, 1995 and 1997), provided by Walker & Associates of Tukwila, Washington, were reviewed for indication of historical activities.

1936

The subject site and sites immediately adjacent appeared to be developed primarily for agricultural use. The subject site is bordered to the east by Airport Way South. Railroad tracks were identified east of the site across Airport Way South Road. A small runway strip, several hangars, and aircraft were observed north of the site. A residential building was observed south of the site.

1946

The subject site appeared as a grassy part of the airfield bordering the more developed taxiway and appeared to have been used as part of the airfield. An unidentified oblong building was just south of the site. Airport runways appear longer and some larger airplanes were observed. Some of the hangars north of the airport had been removed.

1956

The subject site appears to be the grassy part at the end of the southeast taxiway of the airfield. Immediately to the south was industrial building. We learned that this was Boeing's Reventment Building. This three-sided fortified building was used for airplanes firing test rounds of ammunition. Related buildings are part of Boeing's Gunnery Installation. It was difficult to ascertain the exact placement of these buildings with respect to the site boundaries.

1960

The subject site appears the same as the 1956 photo, except for a dirt road in the immediate vicinity of the site. To the west of the site is a blast fence. The majority of the area at the south end of the runway is grass.

1969

The subject site appears to be part grass/dirt/parking lot for the Gunnery Reventment. Both Interstate Highway 5 and Airport Way South have been expanded. The area south of the airport is being used for a tie down of small aircraft. In addition, a small commercial building was identified south of the subject site.

1974

The subject site is still a grass lot (end of taxiway of airport). The building just south of the site, identified as the Boeing Gunnery Reventment, was removed and the entire area south of the airfield appears to be undeveloped.

1980, 1985, 1990 and 1997

The Aeroflight building was first observed in the 1980 photograph. Additional development occurred north of the site between 1974 and 1980. In 1985, 1990 and 1997 the site appears to be built out as observed during the site reconnaissance.

5.2 HISTORICAL MAPS

No pertinent information regarding the Aeroflight site, nor adjoining properties, was found in available Sanborn Fire Insurance maps (provided by Environmental Data Resources Company [EDR] as presented in **Appendix D**). Properties in the surrounding area were covered by Sanborn Fire Insurance Maps dated 1904, 1917, 1929, 1949, and 1966 (**Appendix D**) and provided no additional pertinent information.

Available topographical maps were provided by EDR for the years 1894, 1949, 1968, 1973, 1958, 1965, and 1974 (**Appendix E**). Of these, the 1894, 1949, 1968 and 1973 maps provided information pertinent to the site which is described below.

The 1894 map depicts the Duwamish River before the tideflats were filled and the river was re-routed and channelized. In this map, there appears to be no structures in the area of the current Aeroflight site which is east of the South Park area, south of the bend in the tracks, and just west of the railway. The 1949 map depicts the Duwamish Waterway and Boeing Field. There appears to be a structure on or near the Aeroflight site. The site is located east of the air strip, approximately one quarter of the length from the bottom of the Boeing Field air strip, near the roadway west of the railroad tracks. Perimeter Road South does not appear in this map. The 1968 map shows Perimeter Road South and added buildings north of the property. The 1973 map is similar to the 1968 map except that the airport is listed as the King County International Airport (not Boeing Field).

5.3 LOCAL STREET DIRECTORIES

Seattle City Directories (Polk's 1938, 1940, 1942, 1943-44, 1951, 1955, 1959, 1965, 1967, 1970, 1975 and 1985 and Cole's 1980-81, 1989-90, and 1994-95) were reviewed.

The 1938 directory is the first city directory with a street cross-reference. In this directory, Duwamish Road is noted to have changed (in the past) to Airport Way. It is assumed that access in this area was via Airport Way (prior to the construction of Perimeter Road South sometime between 1959 and 1965, running parallel to Airport Way). In this 1938 directory, the Production For

Use Association Farm Project listing at 8301 Airport Way is the most southern address. In 1942 there is a residence at 8630 Airport Way and the Meadows Sanitarium is at 9401 Airport Way. In the 1951 directory, the Northwest Propeller and Pipe Company is listed at 9251 Airport Way; six names residing at the Meadows at 9401 Airport Way are listed.

The King County Airport is listed on Airport Way without a street number in the 1938, 1940, 1942, 1943-44 directories. In the 1951 directory, Boeing Field is listed with an address of 7227 Airport Way; King County Airport is no longer used to refer to the airport. Businesses and government agency services related to air flight and the manufacture and servicing of aircraft are listed on the airport directory. These listings do not have a separate address from the King County Airport.

Using the street numbers and building listings as a reference point, there appears to be no established commercial or residential structures on Perimeter Road South as far south as the Aeroflight site until the 1965 directory where the Rainier Air Services Inc. and Flight School at 8333 Perimeter Road and the State Aeronautics Commission at 8600 Perimeter Road are listed. The State Aeronautics Commission exists at this address through to the most recent directory. In the 1970 directory, there are multiple business listings (Radaire Inc., MFR Aircraft, and General Aviation Aircraft Services and Instructions) at 8500 Perimeter Road. In the 1975 directory, the Aerospace Corporation and the Boeing Employees Flying Association is listed at 8500 Perimeter Road.

The current Aeroflight site address of 8555 Perimeter Road is first listed in the 1980-81 directory as Pacific Aviation. This information could not be confirmed by knowledgeable personnel during site interviews. In the 1985 directory, Competition Aircraft and Club One Flight Group (aircraft sales) is listed at this address. The 1989-90 directory lists Aeroflight Executive Service, Eagle Aircraft Sales (aircraft sales) and Richardson Aviation (mini fixed-based operation services) beginning in 1988 at 8555 Perimeter Road. The 1994-95 directory lists Aeroflight Executive Service beginning in 1990 and Northwest Aerodata (computer programming) beginning in 1991.

Puget Sound Flight Center, also known as Hughes Helicopter Training Center was also identified from a 1980 Seattle Telephone Directory Yellow Pages. Puget Sound Flight Center provided training and sold new equipment for Hughes Helicopters.

5.4 TAX ASSESSOR RECORDS

On February 27, 1998 the tax assessor records were reviewed at the King County Archives and indicated that the Aeroflight building was constructed in 1975. Additionally, airport directories and available maps (1959, 1962, and 1978) were reviewed for historical use of the site and surrounding area.

5.5 PERSONNEL INTERVIEWS

EcoChem personnel interviewed Jeff Winters of King County International Airport, and Mike Hill of Aeroflight. Based on the information from the transaction screen questionnaire and subsequent phone interviews, they were not aware of any environmental permits, violations, litigation, chemical releases or underground storage tanks on the site.

6.0 RESULTS OF INVESTIGATION

6.1 FINDINGS

A review of site history shows that during the 1930s the site was developed for agricultural use. From the 1940s to at least the early 1970's the site appeared to be part of Boeing's Gunnery Installation which consisted of a main building and several support buildings. We were not able to ascertain the exact location of gunnery activities with respect to the Aeroflight site, but from aerial photographs we reviewed it did not appear that impact from shooting activities occurred onsite. In 1975, the site was developed into a two-story office and airport maintenance shop. The area surrounding the site has historically been and is currently developed with commercial and light industrial properties.

A review of federal, state, and local information shows that the site has not been documented by federal or state agencies to have environmental problems. We also did not identify documented spills or releases. Present fuel handling activities have some potential for spills to occur and minor spillage was observed in several locations. Historical drains inside the shop have been plugged for at least the past 8 years, which limit the potential of spillage that occurs inside the shop to be discharged to the outside environment. However, the catch basins have not been plugged; leakage could occur around joints and cracks in catch basin and (in the past) drain lines, thereby releasing contaminants to the subsurface. Some potential contaminant transport in the form of surface run-off from adjacent properties to the Aeroflight site was identified during this review. At this time we did not identify significant evidence of contaminant transport onsite from surface run-off although we were informed that pilots routinely discharge small quantities of fuel on the pavement when they perform sump checks. No hazardous waste sites, facilities generating or transporting hazardous waste, or leaking underground storage tanks were identified in the vicinity of the property or at locations with potential for contaminants to migrate to the property. No actively leaking underground storage tanks were identified within 0.5 mile of the property.

6.2 CONCLUSIONS AND RECOMMENDATIONS

6.2.1 Potential Soil and Groundwater Contamination

We conclude there is some potential for contamination from current and past aircraft maintenance activities as a result of surficial spillage of petroleum products, or possibly cleaning solvents. Depending upon the volume and type of material spilled or discharged, contaminants may have seeped through cracks in the pavement or drain system. Also, should the site have been a part of the historical Boeing Gunnery, there is some potential for lead contamination. However, at this time, we do not believe the site fell within the impact area.

A subsurface investigation would be required to better evaluate the potential for soil and groundwater contamination.

6.2.1 Other Regulated Materials

Due to the age of the building, we identified the potential presence of asbestos in some building materials. We recommend conducting a complete asbestos survey before any remodelling or

demolition. We recommend abatement of all identified asbestos containing materials in accordance with EPA, local health department, local air pollution control agency regulations and California Department of Labor and Industries procedures.

Some of the fluorescent light fixtures observed onsite could pre-date fixtures manufactured after 1979 which do not contain PCBs. Standard EPA policy is to assume that ballasts contain PCBs if they are not labeled "No PCBs." During routine maintenance and remodeling, AGI recommends inspection of such fixtures for labels indicating that they are PCB-free. Ballasts without "No PCBs" labels should be removed and disposed of in accordance with EPA, state, and local regulations.

The age of the building indicates the exterior and interior could be lead based. AGI did not observe peeling paint that could present an imminent potential health concern. If remodeling activities include sanding, scraping, or heating painted surfaces, we recommend that these surfaces be tested for the presence of lead.

7.0 USE OF REPORT

This Phase I environmental site assessment report has been prepared for the exclusive use of King County for this project only. Our scope of services was developed in conjunction with King County involvement to achieve specific project objectives, with the intent of establishing an appropriate balance between level of effort and uncertainty. Providing this report to others not party to this mutual scope determination, or using it for other projects or purposes, can result in misunderstandings or incorrect assumptions. AGI and EcoChem cannot be responsible for interpretation or extrapolation of the data contained herein, except as stated in our conclusions.

Our conclusions are based on data described herein and our experience and professional judgement. The data were either made available to AGI and EcoChem or reasonably obtained within the practical constraints of our scope of services. Nothing can be done to eliminate all unknowns; however, we can help you take steps to lessen their impact. If you become aware of data we did not consider, or have any questions concerning our conclusions, please advise us immediately.

There is no such thing as a perfect due diligence and no practical study or procedure can or should be expected to discover all potential contamination. However, we believe this environmental assessment does represent due diligence as determined in accordance with professional standard of care. This standard is the current level of care and skill ordinarily exercised by members of the engineering profession practicing under similar conditions in the project area. AGI and EcoChem cannot be responsible if due diligence standards change or if you are required to meet a higher standard.

8.0 REFERENCES

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DISTRIBUTION

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Quality Assurance/Technical Review by:

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FIGURES

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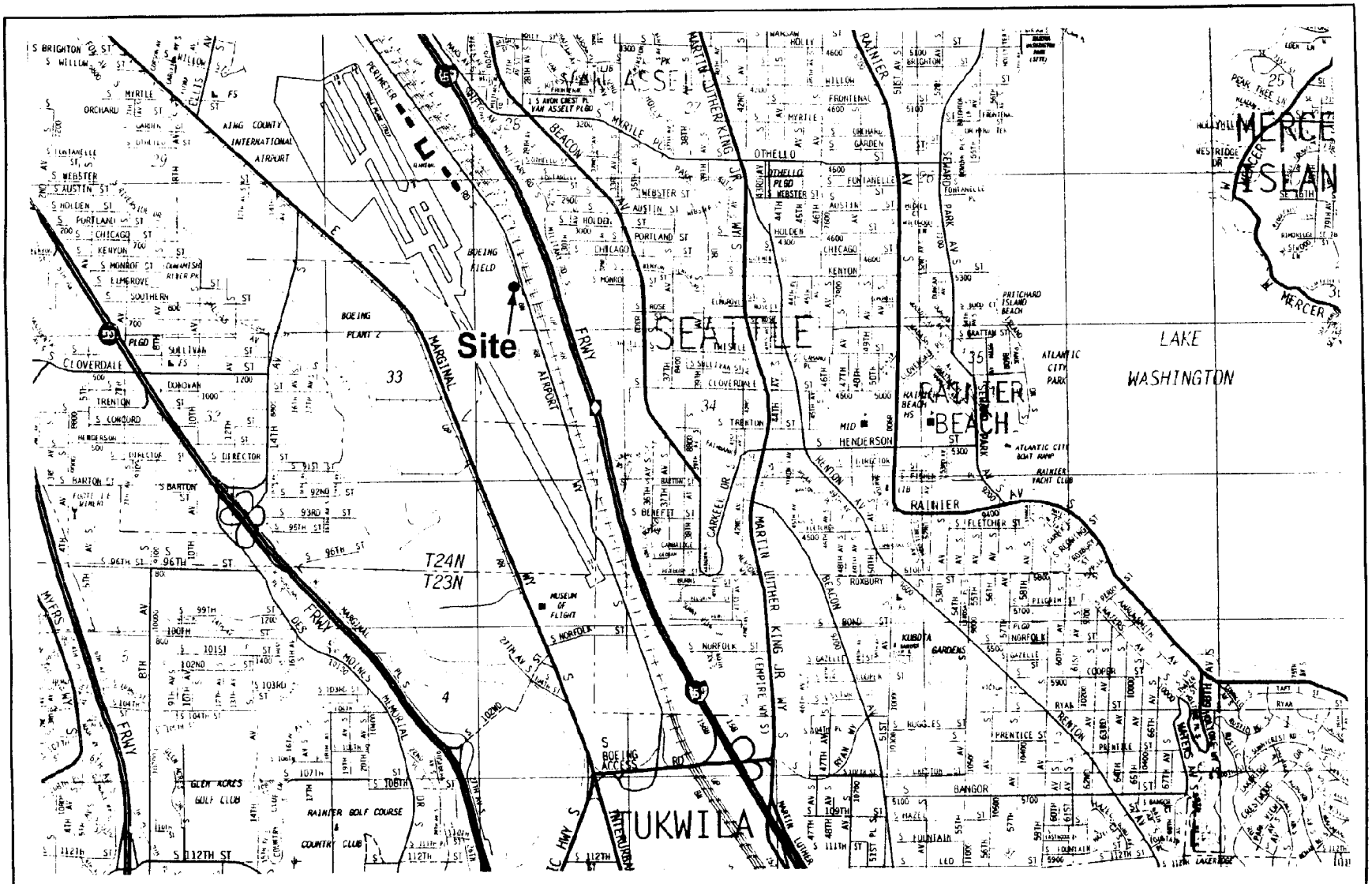

Reference: Thomas Bros. Maps, The Thomas Guide, 1997 Edition

AGI TECHNOLOGIES

Vicinity Map

King County/Aeroflight Phase I EA
Seattle, Washington

FIGURE 1

PROJECT NO	DRAWN	DATE	APPROVED	REVISED	DATE
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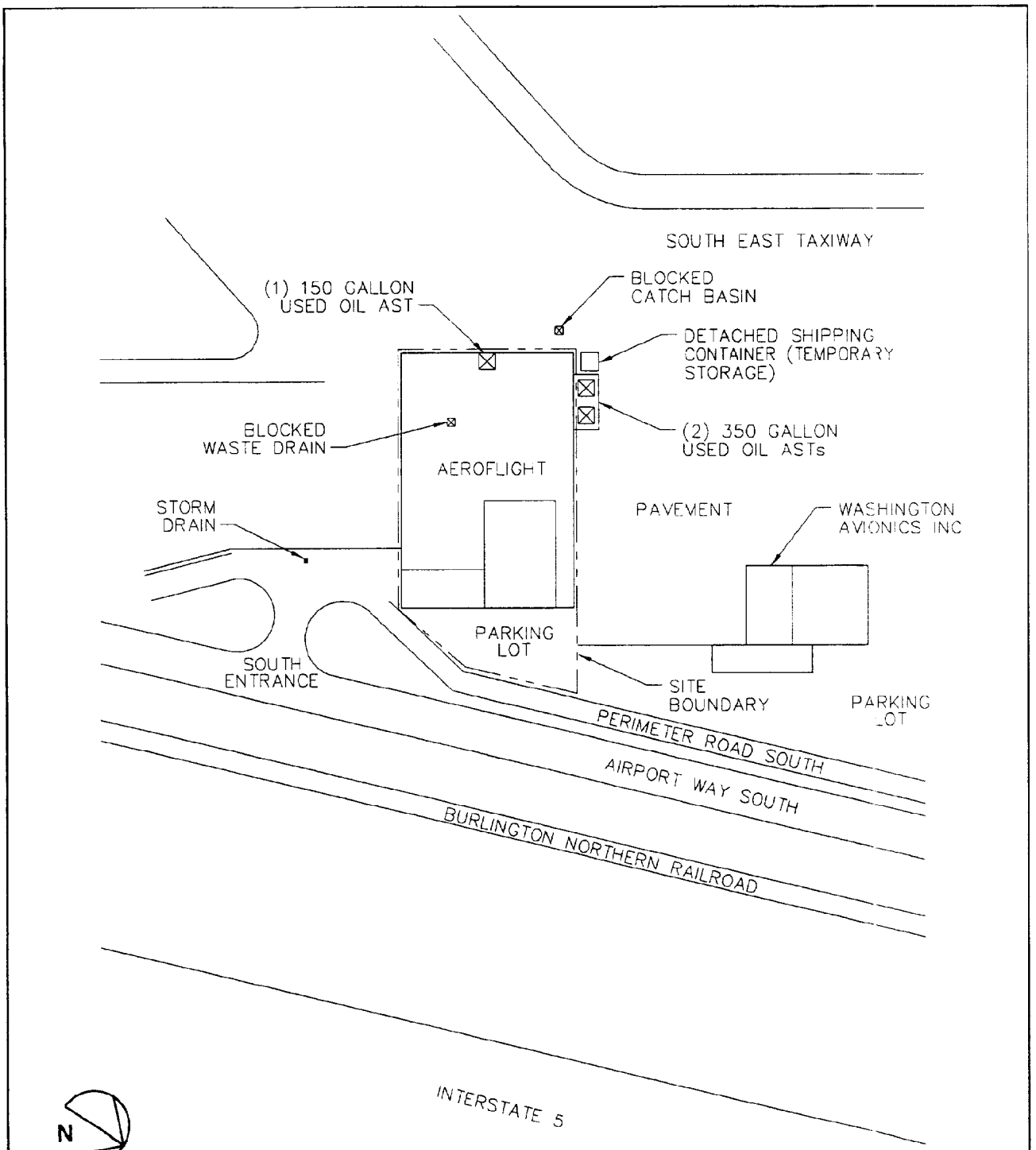
KCSlip4 39370

SEA405900



Reference: Base map provided by King County Department of Construction and Facility Management.

AGI TECHNOLOGIES

Site Plan

King County/Aeroflight Phase I EA
Seattle, Washington

FIGURE 2

PROJECT NO.	DRAWN	DATE	APPROVED	REVISED	DATE
309454s1.dwg	14,309.454	CEC	4 Mar 98		

KCSlip4 39371

SEA405901

APPENDIX A

APPENDIX A

Site Photographs

View of Aeroflight building.

AGI TECHNOLOGIES

Site Photograph

King County/Aeroflight Phase I EA
Seattle, Washington

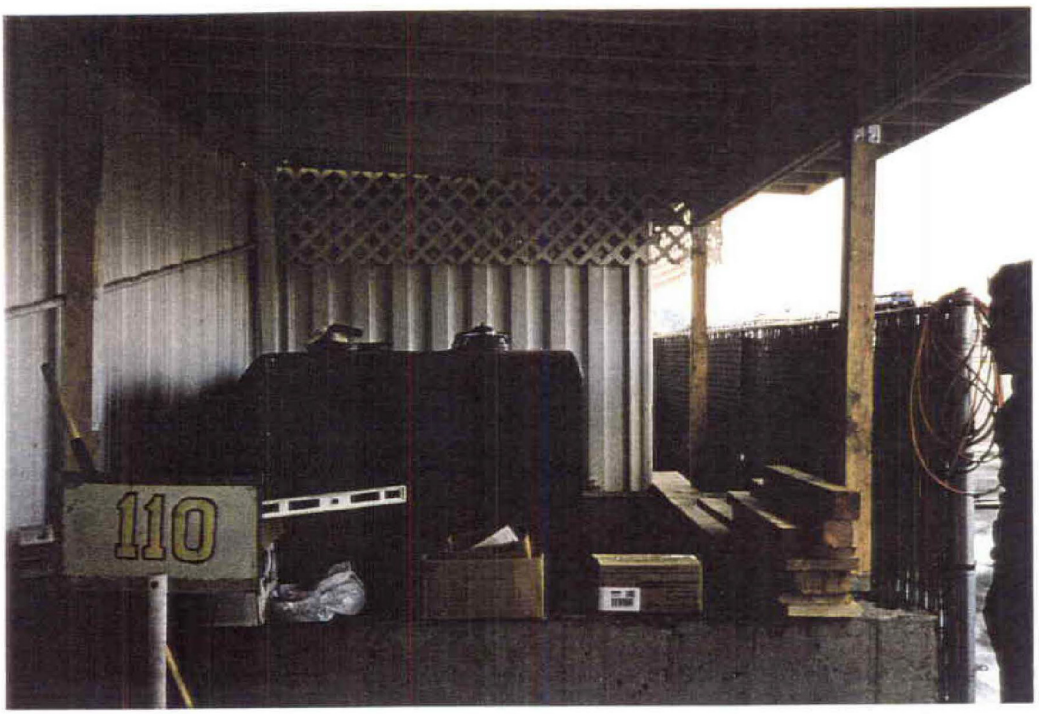
PLATE
A1

PROJECT NO.	DRAWN	DATE	APPROVED	REVISED	DATE
14,309.454	CEC	11 Mar 98			

309454p1.cdr

KCSlip439374

SEA405904



Two 350 gallon above ground tanks.

AGI TECHNOLOGIES

Site Photograph

King County/Aeroflight Phase I EA
Seattle, Washington

PLATE A2

309454p1.cdr	PROJECT NO. 14,309.454	DRAWN CEC	DATE 11 Mar 98	APPROVED	REVISED	DATE

KCSlip439375

SEA405905

APPENDIX B

APPENDIX B

Transaction Screen Questionnaire

EcoChem, Inc.

Project No.: C 7010-1
Site Name: King County Airport / Boeing Field
Address: 6555 Perimeter Road
Tukwila, WA 98100

PHASE I SITE ASSESSMENT TRANSACTION SCREEN QUESTIONNAIRE

Question	Owner			Occupants (if applicable)			Observed During Site Visit		
1. Is the *property* or any *adjoining property* used for an industrial use?	(Yes)	No	Unk	(Yes)	No	Unk	(Yes)	No	Unk
2. To the best of your knowledge, has the *property* or any *adjoining property* been used for an industrial use in the past?	(Yes)	No	Unk	(Yes)	No	Unk	(Yes)	No	Unk
3. Is the property or an adjoining property used as a gasoline station, (motor repair facility,) commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment storage, disposal, processing, or recycling facility? aircraft	(Yes)	No	Unk	(Yes)	No	Unk	(Yes)	No	Unk
4. To the best of your knowledge has the property or any adjoining property been used as a gasoline station, (motor repair facility,) commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment storage, disposal, processing, or recycling facility? aircraft	(Yes)	No	Unk	(Yes)	No	Unk	(Yes)	No	Unk
5. Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19L) in volume or 50 gal (190L) in the aggregate stored on or used at the property or at the facility? Jan 2/26/96 accidentally leaked by mule Hill.	(Yes)	No	(Unk)	(Yes)	No	Unk	(Yes)	No	Unk

Question	Owner			Occupants (if applicable)			Observed During Site Visit		
6. Are there currently, or to the best of your knowledge have there been previously, any industrial *drums* (typically 55 gal (208L)) or sacks of chemicals located on the property or at the facility?	Yes	No	(Unk)	(Yes)	No	Unk	(Yes)	No	Unk
7. Has fill dirt been brought onto the property that originated from a contaminated site or that is of an unknown origin?	Yes	No	(Unk)	Yes	(No)	Unk	Yes	(No)	Unk
8. Are there currently, or to the best of your knowledge have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal?	Yes	(No)	Unk	Yes	(No)	Unk	Yes	(No)	Unk
9. Is there currently, or to the best of your knowledge has there been previously, any stained soil on the *property*?	Yes	No	(Unk)	Yes	(No)	Unk	Yes	(No)	Unk
10. Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*? waste oil tank.	Yes	(No)	Unk	(Yes)	No	Unk	(Yes)	No	Unk
11. Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* or adjacent to any structure located on the *property*?	Yes	(No)	Unk	Yes	(No)	Unk	Yes	(No)	Unk
12. Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water, or are emitting foul odors?	Yes	No	(Unk)	Yes	(No)	Unk	Yes	(No)	Unk

Question	Owner			Occupants (if applicable)			Observed During Site Visit		
13. If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency?	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
	NA								Na
14. Does the *owner* or *occupant* of the *property* have any knowledge of *environmental liens* or governmental notification relating to past or current violations of environmental laws with respect to the *property* or any facility located on the *property*?	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
15. Has the *owner* or *occupant* of the *property* been informed of the past or current existence of *hazardous substances* or *petroleum products* or environmental violations with respect to the *property* or any facility located on the *property*?	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
16. Does the *owner* or *occupant* of the *property* have any knowledge of any *environmental site assessment* of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*?	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
17. Does the *owner* or *occupant* of the *property* know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property* by any owner or occupant of the *property*?	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk

Question	Owner			Occupants (if applicable)			Observed During Site Visit		
18. Does the *property* discharge waste water on or adjacent to the *property* other than storm water into a sanitary sewer system?	Yes	No	(Unk)	Yes	(No)	Unk	Yes	(No)	Unk
19. To the best of your knowledge, have any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*?	Yes	No	(Unk)	Yes	(No)	Unk	Yes	(No)	Unk
20. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs?	Yes	(No)	Unk	Yes	(No)	Unk	Yes	(No)	Unk

This questionnaire was completed by:

Name Jeff Winter
Title Airport Engineer
Firm KC Airport
Address PO Box 80245
Seattle WA 98108

Phone Number 206 296 7425
Date 2-25-98

Name Michael Hill
Title President
Firm Aerolight
Address 8555 Perimeter Rd. South.

Phone Number 206-763-7842
Date 02-25-98

Name Jessie Compeau
Title Chemist
Firm EcoChem, Inc.
Address 405 Westland Building
100 South King Street
Seattle, WA 98104

Phone Number (206) 233-9332
Date 2/25/98

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SEA405912

AGI TECHNOLOGIES

APPENDIX C

EDR - Radius Map with GeoCheck™, Orphan Summary List, and Errors List

KCSlip4 39383

SEA405913

The EDR-Radius Map
with GeoCheck™

AGI/King County Airport Areo Flight Pro.
8555 Perimeter Rd
Tukwila, WA 98108

Inquiry Number: 227574.1s

February 04, 1998

Environmental Data Resources, Inc.
an edr company

The Source For Environmental Risk Management Data

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Nationwide Customer Service

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APPENDIX D

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SEA406008

APPENDIX D

EDR - Fire Insurance Map Abstract

The EDR-Fire Insurance Map
Abstract

AGI/King County AP Aeroflight
8555 Perimeter Rd
Tukwila, WA 98108

February 9, 1998

Inquiry Number: 227574-5

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Southport, Connecticut 06490

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Fax: 1-800-231-6802

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Environmental Data Resources, Inc.
Sanborn Map™ Abstract

Environmental Data Resources, Inc.'s (EDR) Sanborn Map™ Abstract is a screening tool designed to assist professionals in evaluating potential liability on a target property resulting from past activities on the property or adjoining properties. ASTM E 1527-97, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of *reasonably ascertainable standard historical sources. Reasonably ascertainable is defined as information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable.*

To meet the prior use requirements of ASTM E 1527-97, Section 7.3.2, the following *standard historical sources* may be used: aerial photographs, city directories, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, building department records, or zoning/land use records. ASTM E 1527-97 requires *"All obvious uses of the property shall be identified from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful."* (ASTM E 1527-97, Section 7.3.2, page 11.)

EDR's Sanborn Map Abstract includes a search and review of its Sanborn fire insurance map collection.

Sanborn Maps

Fire insurance maps were initially produced by private companies (such as Sanborn, Perris, Spielman and Brush, Hexamer, Scarlett, and the Fire Underwriters Inspection Bureau) for the insurance industry to provide information on the fire risks of buildings and other structures. Sanborn Maps have become a valuable historical resource for persons concerned with evaluating the potential for site contamination based on the history of past use. Fire insurance maps are available for approximately 12,000 U.S. cities and towns during the period 1852 to the present. Map coverage is most comprehensive in urban core areas and in older suburbs; map coverage is limited in suburban areas developed after 1950.

EDR reviews its collection of Sanborn Maps, the largest and most complete collection available. There may be instances where a Sanborn Map is not currently reproducible or is part of an outside collection. EDR has generally found that such maps are not attainable within time and/or cost constraints which are (a) reasonable under ASTM E 1527-97 (and, therefore, a review of such map, if it exists, is not required to meet the ASTM standard) or (b) desired by the user of the report. EDR will, upon request, perform such a search at an additional fee which may result in a delay in the issuance of the report.

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The EDR-Historical Topographic Map Report

AGI/King County Airport Areo F
8555 Perimeter Rd
Tukwila, WA 98108

February 10, 1998

Inquiry Number: 227574-3

***The* Source For Environmental Risk Management Data**

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Southport, Connecticut 06490

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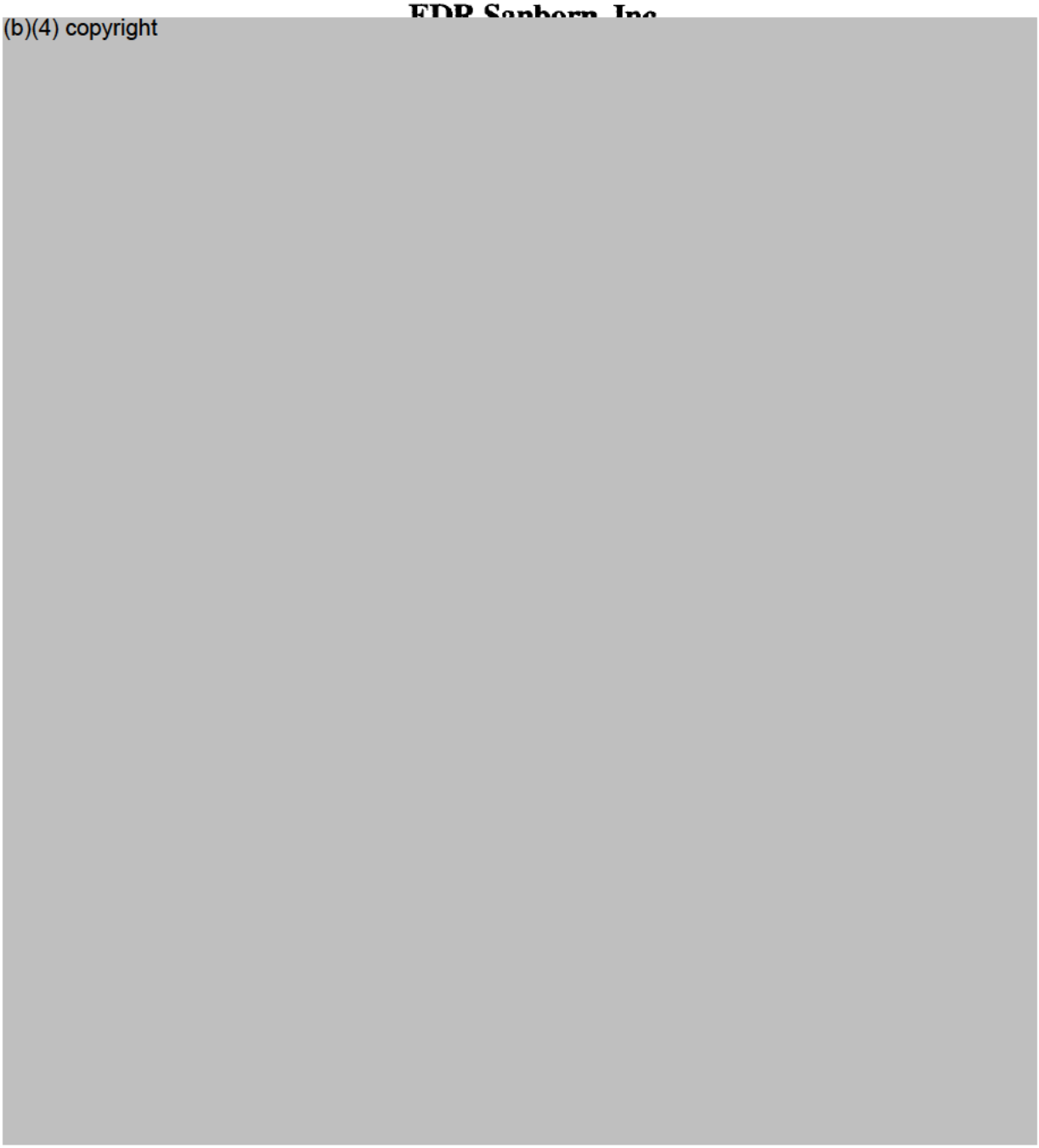
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